

ABSTRACT OF THE DISCLOSURE

In a lead-free solder comprising an alloy composition composed mainly of tin, the alloy composition further contains 0.002 to 0.015% by mass of phosphorus. This lead-free solder can be used as a plating in a connection lead comprising: a copper strip or other strip conductor; and the plating provided on at least one side of the strip constructor, the plating having a shape such that the plating in the widthwise direction of the strip conductor has a bulge as viewed in section with the apex being located at a proper position in the widthwise direction of the strip conductor. By virtue of this constitution, the lead-free solder on its surface is less likely to be oxidized, and the connection lead has excellent bond strength owing to the property of the lead-free solder and, in addition, has the function of breaking the formed oxide layer and the function of removing included gas bubbles and can eliminate the need to form the plating in very large thickness. Further, the lead-free solder can be used as a connection element in an electrical component that is less likely to cause oxidation of the connection element on its surface and, thus, can have a strong connection structure by the connection element.